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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,510	02/27/2004	Muhammad Chishti	018563-004920US	7442
46718	7590	01/07/2005	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP (018563) TWO EMBARCADERO CENTER, EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			WILSON, JOHN J	
			ART UNIT	PAPER NUMBER
			3732	

DATE MAILED: 01/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/788,510	CHISHTI ET AL.	
	Examiner	Art Unit	
	John J. Wilson	3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 and 3 is/are allowed.
- 6) ☒ Claim(s) 1 and 4-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/26/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 1/ 4-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, line 4, "a plurality of one or more" is unclear because it is not possible to have a plurality of one. For purposes of the Office Action, it is assumed that the claim is directed to a plurality.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Andreiko et al (5683243) in view of Kurz (4348178). Andreiko shows digitally modeling a set of teeth, Figs. 1 and 2. This modeling includes a scan of the patient's teeth. The position of the teeth when scanned are inherently in a predetermined position, that is the original position. Andreiko also teaches modeling a desired predetermined position. Andreiko does not show generating a plurality of appliances. Kurz teaches that it is known to make an appliance using a model of the teeth in a position, column 1, lines 15-40, and that the present invention of Kurz makes use of

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such tooth positioner mouth pieces, column 1, lines 50-51, and further teaches using a plurality of such mouth pieces, column 3, lines 22-47. The disclosed model of teeth of Kurz is also inherently predetermined by the position of the patient's teeth used to make the positioner. The claimed method step of digitally modeling the teeth and the claimed method step of generating appliances are separate independent steps, not tied together in any way, and therefore, It would be obvious to one of ordinary skill in the art to modify Andreiko to include the step of generating a plurality of appliances as shown by Kurz because a list of known method steps shown in the prior art properly meets the separate list of method steps in the claim.

Claims 1/ 4-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andreiko et al (5683243) in view of Kurz (4348178) as applied to claims 1-3 above, and further in view of Acevedo (3983628). The above combination does not show using an ideal set of teeth. Acevedo teaches that it is known to use an ideal arch when calculating desired positions for teeth, column 4, lines 16-27. It would be obvious to one of ordinary skill in the art to modify the above combination to include the use of an ideal set of teeth as shown by Acevedo in order to better obtain the desired prescription for moving teeth. As to claim 5, Kurz teaches the use of models, which is well known in the art to use with articulators to best determine bite and proper tooth position, however, does not show using a masticatory system. Acevedo teaches using a masticatory system in the form of an articulator to register models. It would be obvious to one of ordinary skill in the art to modify Kurz to include a masticatory system as shown by Acevedo to better determine the desired position of the teeth. As to claims 6 and 7, the use of X-ray and computer tomography are conventional in the art, see the present disclosure, paragraph [0044],

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and therefore, would be obvious to the skilled artisan for determining occlusion. As to claim 9, the motion of the articulator of Acevedo is inherently applying kinematics. As to claim 10, the motion of the articulator of Acevedo is inherently constrained as shown. As to claims 11-13, avoiding and minimizing undesirable contacts would be obvious in order to best move the teeth to one of ordinary skill in the art. As to claim 14, the method of determining undesirable contacts is an obvious matter of choice in calculations used by the skilled artisan. As to claim 15, to call the motions allowed by an articulator a "library" is an obvious matter of choice in terminology to one of ordinary skill in the art. As to claims 16 and 17, it is well known to simulate protrusive and lateral motions on an articulator.

Claims 1/ 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andreiko et al (5683243) in view of Kurz (4348178) and Acevedo (3983628) as applied to claim 5 above, and further in view of Duret et al (4611288). The above combination does not show using computer models, scanning and the use of features. Duret teaches using computer models to determine occlusion, using scanning, Figs. 10-13, and using features, column 6, lines 3-8. It would be obvious to one of ordinary skill in the art to modify the above combination to include the use of digital methods as shown by Duret in order to best model the teeth. The above teaching of Kurz to make plural appliances, implies that a new prescription is needed for each.

Allowable Subject Matter

Claims 2 and 3 are allowed.

Claims 2/ 4-24 and 3/ 4-24 are objected to for being part of rejected multiple dependent claims, however, would be allowed if rewritten to be separate from the rejected claims.

Drawings

The drawings filed November 26, 2004 have been approved and have been found to be acceptable by the examiner.

Information Disclosure Statement

The IDS filed November 26, 2004 is not proper because a CD is not a proper format for filing references. Further, the images on the CD were of such poor quality as to make it impossible to discern. Because the U.S. references were available to the examiner, they have been considered, however, all non-U.S. references have not been considered.

Response to Arguments

Applicant's arguments filed November 26, 2004 have been fully considered but they are not persuasive. As stated above, because the generating of a plurality of appliances is not in any way tied to the step of digital modeling, the above combination is proper.

Conclusion

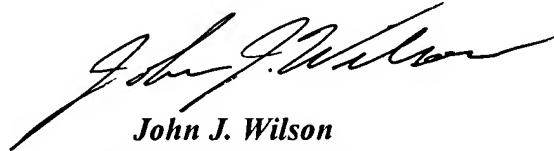
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Wilson whose telephone number is 571-272-4722). The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin P. Shaver, can be reached at 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John J. Wilson
Primary Examiner
Art Unit 3732

jjw
January 4, 2005